

S/035/62/000/010/117/128
A001/A101

AUTHORS: Voronov, P. S., Ushakov, S. A.

TITLE: Some problems of studying processes of isostasy in the Antarctic

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 10, 1962, 39, abstract 10G199 ("Inform. byul. Sov. antarkt. ekspeditsii", 1961, no. 30, 5 - 8)

TEXT: The most explorers consider isostatic equilibrium of the Antarctic as a result of Earth's crust sagging under the ice load weight. Main problems in studying the mechanism of isostasy are as follows: 1) establishing the character of reaction of various structural zones of the terrestrial crust to cover glaciation; 2) determination of the area of the peripheral zone of the antarctic continent free of continental ice and sunken considerably below the normal level, which will make possible to determine more precisely the values of elastic-plastic properties of the terrestrial crust; 3) establishing geophysical evidence of isostatic rise of Eastern Antarctic block mountains, as a result of which it will be possible to determine the mechanism of spreading of the substratum.

[Abstracter's note: Complete translation]
Card 1/1

B. Bryusov

VORONOV, P.S.

Possibilities of finding Devonian potassium and boron salts
in the area of Khatanga Bay. Trudy NIICA 80:182-183 '58. (MIRA 14:11)
(Khatanga Bay region--Salts)

VORONOV, P.S., kand.geolog-mineralogicheskikh nauk

Absolute age of rocks and the structure of Antarctica. Inform.
biul.Sov.antark.eksp. no.31:15-21 '61. (MIRA 15:4)

1. Nauchno-issledovatel'skiy institut geologii Arktiki.
(Antarctic regions--Geology, Structural) (Geological time)

VORONOV, P.S., kand.geologo-mineralogicheskikh nauk; KARASIK, A.M., geofizik

Physical properties of the rocks of the Vestfold Hills and
their geological interpretation. Inform. biul. Sov. antark.
eksp. no.33:10-14 '62. (MIRA 16:2)

1. Nauchno-issledovatel'skiy institut geologii Arktiki.
(Vestfold Hills, Antarctica--Rocks--Testing)

VORONOV, P.S.

Dependence of the morphostructural plan of the Antarctica and
Arctica on the rotational forces of the earth. Geog.#bor.
no.15:138-150 '62. (MIRA 15:12)

(Earth--Rotation)
(Polar regions--Geomorphology)

VORONOV, P.S.; YEGOROVA, I.S.

Analyzing the orientation of linear sections of river valleys in the southeastern Taymyr Peninsula for purposes of recent tectonic studies. Trudy NIIGA 80:139-148 '58. (MIRA 14:11)
(Taymyr Peninsula---Geology, Structural)

VORONOV, P.S., kand.geologo-mineralogicheskikh nauk; KOBLENTS, Ya.P.,
kand.tekhnicheskikh nauk

Using the drift of icebergs in studying the relief of the
Antarctic shelf. Inform. biul. Sov. antark. eksp. no.27:9-13
'61. (MIRA 14:7)

1. Nauchno-issledovatel'skiy institut geologii Arktiki (for
Voronov).
2. Arkticheskiy i antarkticheskiy nauchno-issledova-
tel'skiy institut (for Koblents).
(Antarctic regions—Submarine topography)
(Icebergs)

S/169/62/000/006/013/093
D228/D304

AUTHORS: Voronov, P. S. and Ushakov, S. A.

TITLE: Some questions of the study of processes of isostasy in Antarctica

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 6, 1962, 19, abstract 6A133 (Inform. byul. Sov. antarkt. ekspeditsii, no. 30, 1961, 5-8)

TEXT: Most research workers recognize the isostatic equilibrium of Antarctica as the result of the crust's warping under the weight of the ice load. The chief problems of the study of the mechanism of isostasy are as follows: 1) Establishing the nature of the reaction of different crustal structural zones on the glaciation cover; 2) determining the area of the Antarctic mainland's peripheral zone that is devoid of continental ice and has sunk well below the normal level, which will allow the values of the crust's elastic-plastic parameters to be defined more accurately; and 3) obtaining geophysical proof of the isostatic uplift of East Antarctica's

Card 1/2

S/169/62/000/006/013/093
D228/D304 ✓

Some questions of ...

block mountains, as a result of which it will be possible to fix
the mechanism of substratal diffluence. / Abstracter's note: Com-
plete translation. /

Card 2/2

S/169/62/000/004/059/103
D228/D302

AUTHORS: Voronov, P. S. and Kruchinin, Yu. A.

TITLE: The finding of marine sediments on the surface of the Lazarev shelf glacier

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 4, 1962, 58, abstract 4V343 (Inform. byul. Sov. antarkt. ekspeditsii, no. 29, 1961, 22-26)

TEXT: The examination of one of the shelf glaciers near Stn. Lazarev led to the discovery on the vertical surface of one of the fissures in the glacier of shapeless dark spots with an area of 200 - 300 m²; these consisted of disseminations of shingle, silt, and some organic remains in the ice. The study of their composition indicates that traces of chemical weathering processes are practically absent in these remains; and that bottom material which belongs to the category of normal iceberg sediments, has been found. The results of geologic and zoologic comparisons lead

Card 1/2

The finding of marine ...

S/169/62/000/004/059/103
D228/D302

to the conclusion that recent marine sediments were encountered on the surface of the Lazarev shelf glacier; it is noted that this kind of discovery also applies to other places in Antarctica. There is some doubt about the hypothesis, according to which the continuous movement of the mass of the ice layers forming the shelf glacier takes place upwards at the expense of freezing below and the intensive melting and sublimation of ice from the glacier's upper surface, since no bedding is observed among the organic and the terrigenous inclusions. The assumption is made that it is possible for such inclusions to be formed at the expense of the articulation of a whole row of icebergs, some of which could have been inverted. 7 references. / Abstracter's note: Complete translation. /

Card 2/2

KAPITSA, A.P.; VORONOV, P.S., kand. geologo-mineral. nauk, red.;
FILIPPOV, A.K., red.; DROZHZHINA, L.P., tekhn. red.

[Transactions of the Soviet Antarctic Expedition, 1955]
Trudy Sovetskoi antarkticheskoi ekspeditsii, 1955-. Lenin-
grad, Izd-vo "Morskoi transport." Vol.18. [Dynamics and
morphology of the ice cap in the central sector of eastern
Antarctica] Dinamika i morfologiya lednikovogo pokrova
tsentral'nogo sektora Vostochnoi Antarktidy, Pod red. P.S.
Voronova. 1961. 92 p. (MIRA 15:3)

1. Sovetskaya antarkticheskaya ekspeditsiya, 1955-.
(Antarctic regions---Ice)

VORONOV, P.S., kand.geologo-mineralogicheskikh nauk

Chart of recent tectonics in Antarctica. Inform. Biol. Ser. antark.
eksp. no.24:10-14 '60. (MIRA 14:5)

1. Nauchno-issledovatel'skiy institut geologii Arktiki.
(Antarctic regions—Geology, Structural)

VORONOV, P.S., kand.geologo-mineralogicheskikh nauk

Quaternary deposits of Antarctica. Inform. biul. Sov. antark.
eksp. no.26:5-8 '61. (MIRA 14:7)

1. Nauchno-issledovatel'skiy institut geologii Arktiki.
(Antarctic regions—Geology, Stratigraphic)

VORONOV, P.S.

Antarctic structure. Trudy NIIGA 113:5-24 '60. (MIRA 14:5)
(Antarctic regions--Geology, Structural)

VORONOV, P.S.; KLIMOV, L.V.; ORLENKO, Ye.M.

Geological structure of Mount Brown. Trudy NIIGA 113:98-122 '60.
(Brown, Mount, Antarctica—Petrology) (MIRA 14:5)

VORONOV, P.S.

Some geomorphological features of Antarctica. Trudy NIIGA 113:183..
208 '60. (MIRA 14:5)

(Antarctic regions—Geology)

VORONOV, P.S.

Corrugations in the Antarctic ice armor. Inform. biul. Sob. antark.
eksp. no.25:59-60 '61. (MIRA 14:5)
(Queen Maud Land---Glaciers)

VORONOV, P.S., kand.geol.-mineral nauk

An attempt to restore the Antarctic ice sheet of the epoch of
earth's maximum glaciation. Inform. biul. Sov. antark. eksp. no.23:
15-19 '60. (MIRA 14:5)

1. Nauchno-issledovatel'skiy institut geologii Antiki,
(Antarctic regions—Glacial epoch)

SOV/169-60-1-645

Translation from: Referativnyy zhurnal, Geofizika, 1960, Nr 1, p 84 (USSR)

AUTHOR: Voronov, P.S.

TITLE: The Operation of an Outlying Station

PERIODICAL: Inform. byul. Sov. antarkt. ekspeditsii, 1959, Nr 4, pp 37 - 41

ABSTRACT: In the region of the ^{IV}"Mirnyy"-observatory (Antarctica), the runoff of cooled lower layers of air (winds running off) from the sides of the ice dome is observed. The study of these runoff winds was carried out from August 1 to 18, 1956, by four outlying stations (OS) located along the meridian at different altitudes and distances from the coast. The operation of the VS-3-outlying station (Chief P.S. Voronov) is described. The station performed measurements of the temperature of air at altitudes of 0.0, 0.5 and 2.0 m and the velocity of wind at altitudes of 0.5 and 2.0 m every three hours, and moreover, glaciologic observations. It was ascertained that two predominant winds can be singled out in the region of the station: a cyclonic eastern or eastera- south-

Card 1/2

The Operation of an Outlying Station

SOV/169-60-1-645

eastern wind in cyclones incoming from the west, and a running off southern - south-eastern wind which blew during 65% of time. The highest velocities were found in cyclonic winds with gusts up to 42 m/sec. Snow was transported in the main by winds running off. It is noticed that the snowdrifts settle in the windless region of the coast barrier.

I.P.



Card 2/2

VORONOV, P.S., kand.geologo-mineral.nauk; KRUCHININ, Yu.A., mladshiy
nauchnyy sotrudnik

Brief physicogeographical characteristics of the region of the
Lazarev South Polar Station. Inform.biul.Sov.antark.eksp.
no.12:5-9 '59. (MIRA 13:6)

1. Nauchno-issledovatel'skiy institut geologii Arktiki (for
Voronov). 2. Arkticheskiy i antarkticheskiy nauchno-issledovatel'-
skiy institut (for Kruchinin).
(Lazarev region, Antarctica--Physical geography)

SOMOV, M.M., otv. red.; MAKSIMOV, I.V., zamestitel' otv.red.; TRESHNIKOV, A.F., zamestitel' otv.red.; ANDRIYASHEV, A.P., red.; BUYNITSKIY, V.Kh., red.; YOROMOV, P.S., red.; DOLGIN, I.M., red.; KALININ, S.V., red.; KOROTKEVICH, Ye.S., red.; NIKOL'SKIY, A.P., red.; RAVICH, M.G., red.; TAUBER, G.M., red.; PROLOV, V.V., red.; SLEVICH, S.B., red.; KAPLINSKAYA, L.G., red.izd-va; DROZHZHINA, L.P., tekhn.red.

[Report on observations completed by the Soviet Antarctic Expedition in 1957 and 1958] Otchet o nabludeniakh, vypolnennykh Sovetskoi antarkticheskoi ekspeditsiei v 1957 i 1958 gg. Sovetskaya antarkticheskaya ekspeditsiya, 1955-1958. Leningrad, Izd-vo "Morskoi transport," 1960. 39 p (Informatsionnyi biulletin', no.15) (MIRA 13:6)
(Antarctic regions--Russian exploration)

VORONOV, P.S.

Clouds as a cause of mountain disintegration in Antarctica.
Inform.biul.Sov.antark.eksp. no.14:37-38 '60.

(MIRA 13:6)

(Conrad Mountains--Weathering)

VORONOV, P.S.

Relationship between the relief of the northern part of central
Siberia and neotectonic processes. Trudy NIIGA 67:94-103 '58.

(MIRA 12:10)

(Russia, Northern--Geology, Structural)

PHASE I BOOK EXPLOITATION

SOV/4339

Sovetskaya antarkticheskaya ekspeditsiya, 1955-

Pervaya kontinental'naya ekspeditsiya 1955-1957 gg.; nauchnyye rezul'taty (First Continental Expedition, 1955-1957; Scientific Results) Leningrad, Izd-vo "Morskoy transport," 1959. 161 p. 2,000 copies printed. (Series: Its: Materialy, tom 2)

Sponsoring Agency: Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

Ed.: M.M. Somov, Doctor of Geographical Sciences; Tech. Ed.: L.P. Drozhzhina.

PURPOSE: This book is intended for polar specialists, geographers, geologists, meteorologists, and geophysicists.

COVERAGE: This book is Volume 2 of a multivolume work containing scientific data collected by the First Soviet Continental Expedition to the Antarctic (1955-57), sent out under the auspices of the Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut (Arctic and Antarctic Scientific Research Institute) as part of the IGY program. The purpose of the expedition was to survey an area between 74 to 111°E longitude and 59 to 70°S latitude (an area of about 1 Card 1/4

First Continental Expedition (Cont.)

SOV/4339

million square kilometers), to develop methods and techniques for field studies applicable to local conditions, and to initiate a systematic study of the natural phenomena of the region. Ground and aerial observations were conducted in the more interesting areas around and between Mirnyy and Pionerskaya, in the three oases of Grierson, Bunger, and Vestfold, on the Shackleton Ice Shelf, Drygalski Island, and a number of nunataks (Amundsen, Gauss, etc.). Geological, geographic, and geophysical observations were made at the Mirnyy Observatory and at the Pionerskaya and Oazis research stations. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Introduction	5
Korotkevich, Ye.S. General Physical Geographic Characteristics of the Expedition's Area of Operation	6
<u>Voronov, P.S. Geological Structure of the Expedition's Area of Operation</u>	19
Rusin, N.P. Some Characteristics of the Radiation and Thermal Balance of East Antarctica	39
Card 2/4	

First Continental Expedition (Cont.)		SOV/4339
Tauber, G.M. Synoptic Conditions in the Indian Ocean Sector of the Antarctic	46	
Tauber, G.M. Characteristics of Meteorological Conditions in the Antarctic in 1956	49	
Rusin, N.P. Meteorological Characteristics in the Region Around the Mirnyy Observatory	55	
Gusev, A.M., and N.P. Rusin. Meteorological Characteristics of the Glacier Slope of East Antarctica	68	
Vtyurin, B.I., L.D. Dolgushin, A.P. Kapitsa, and Yu.M. Model'. Contemporary Ice Cover of East Antarctica and Its Dynamics	73	
Korotkevich, Ye.S. Ice Regime of the Davis Sea and Adjacent Regions of the Ocean	93	
Korotkevich, Ye.S. Biogeographic Characteristics of the Expedition's Area of Operation	104	
Card 3/4		

First Continental Expedition (Cont.)

SOV/4339

Bukin, G.V. Ionospheric Observations	111
Sen'ko, P.K. Magnetic Field in the Region of Mirnyy	115
Sen'ko, P.K., and V.A. Troitskaya. Investigation of Telluric Currents in the Region of Mirnyy	135
Sytinskiy, A.D. Seismic Observations in Mirnyy	153
Paleyev, N.R. Medical Studies in East Antarctica	157

AVAILABLE: Library of Congress (G860.S58)

Card 4/4

JA/dwm/sfm
11-21-60

VORONOV, P.S.; KIRYUSHINA, M.T.; POL'KIN, Ya.I., STRELMKOV, S.A.

Latest tectonic movements in the Arctic portion of the Lena-
Yenisey region. Trudy NIIGA 105:92-115 '59. (KIRA 13:5)
(Russia, Northern--Geology, Structural)

VORONOV, P.S.

Snow "volcanism." Inform. biul. Sov. antark. eksp. no. 4:75-76
'59. (MIRA 12:11)
(Antarctic regions--Snow)

VORONOV, P.S.

Stone patterns. Inform. biul. Sov. antarkt. eksp. no. 2:59-61
'58. (MIRA 12:8)

(Antarctic regions--Erosion)

VORONOV, P.S. , kand.geologo-mineralog.nauk

Geomorphology of the eastern Antarctic. Inform.khul.Sov.antark.
eksp. no.1:35-39 '58. (MIRA 12:8)

1. Nauchno-issledovatel'skiy institut geologii Arktiki.
(Antarctic regions--Physical geography)

VAKAR, V.A.; VORONOV, P.S.; DEMENITSKAYA, R.M.

Regional faults in the northern part of central Siberia. Trudy
NIIGA 67:87-93 '58. (MIRA 12:10)
(Russia, Northern--Faults (Geology))

3(5,8)

SOV/11-59-3-2/17

AUTHOR: Voronov, P.S., Klimov, L.V., and Ravich, M.G.

TITLE: Late Pre-Cambrian Deposits of the Amundsen and Sandau Mountains on Queen Mary Land in the Eastern Antarctic. (Pozdnedokembriyskiye otlozheniya gor Amundsen i Sandau na Zemle Korolevy Meri v vostochnoy Antarktide)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1959, Nr 3, pp 3-18 (USSR)

ABSTRACT: The authors describe in detail the results of the camera treatment of materials gathered by the Soviet Antarctic Expedition in 1956-1957. The extremely rare group of late Cambrian metamorphic rock of green schists, encountered in the Central sector of the Eastern Antarctica for the first time, is dealt with in particular. Exact data on the location of the Amundsen and Sandau mountains are furnished. The geological research of both these mountains was started in January 1957 by L.V. Klimov and P.S. Voronov

Card 1/5

SOV/11-59-3-2/17
Pre-
Late/Cambrian Deposits of the Amundsen and Sandau Mountains on
Queen Mary Land in the Eastern Antarctic

who systematically described the laminar cross section of the terrigenous rock stratum and a total of 70 samples were taken. The collected material was examined by the Nauchno-issledovatel'skiy institut geologii Arktiki (Scientific Research Institute of Arctic Geology). The petrographic description of rock was handled by M.G. Ravich with the assistance of Ye.M. Orlenko. A complete silicate analysis on the green schist of the Sandau mountain was made by A.Z. Shpindler. The absolute age was determined at the Laboratoriya geologii dokembriya AN SSSR (Laboratory of Geology of the Pre-Cambrian Period, AS USSR) under the direction of E.K. Gerling. Orographically, the Amundsen and the Sandau mountains represent typical nunataks, the first one being 50 m, the other 150 m above the ice shield of the Antarctica (Figures 2 and 5). The absolute height of the Amundsen mountain is 1,445 m and that of the Sandau mountain, 1,380 m. Judging from the configuration of ice cracks,

Card 2/5

SOV/11-59-3-2/17
Pre-
Late/Cambrian Deposits of the Amundsen and Sandau Mountains on
Queen Mary Land in the Eastern Antarctic

the Sandau mountain is circumflown from SW by an ice stream heading NW. This ice stream is located approximately 1,5 km from the mountain summit. An analogous stream circumflows the Amundsen mountain from the S and SE. This ice stream is about 2 km away from the Amundsen mountain peak. A petrographic study of these 2 mountains disclosed that the metamorphic rock could be classified into 5 principal groups: 1) metamorphic baltoids, converted into epidotic-chlorite slates with quartz-epidotic and chloritic veins; 2) metamorphic quartz conglomerates; 3) various metamorphic quartz-feldspathic and quartz sandstones in places resembling quartzites; 4) metamorphic aleurolites and argillites; 5) sericitic slates. These 5 groups are fully dealt with. The authors conclude that by comparing the metamorphic terrigenous mountains under discussion for composition, geological status and character of metamorphism with rock series in Siberia, it may be assumed that the most probable time of their

Card 3/5

Pre-
Late/Cambrian Deposits of the Amundsen and Sandau Mountains on
Queen Mary Land in the Eastern Antarctic.

SOV/11-59-3-2/17

formation was the late Pre-Cambrian period. The green slates of the Sandau mountain may be identical with the green slate formation on the Taymyr Peninsula, a number of regions in Eastern Siberia, on the Kola Peninsula and in Kareliya. In all these regions, the green slate formation is considered to originate from the Proterozoic period. The same holds true for the green slate deposited in the Sandau mountain. Psammitic sediments are prevalent in the composition of terrigenous deposits, whereas psephitic aleuropelitic sediments are less developed. Judging from the lithological peculiarities of metamorphic terrigenous rock, the clastic material was deposited by water streams and partly by wind under conditions of a littoral-continental environment. There are 4 photographs, 1 map, 2 sketches and 2 references, 1 of which is Soviet and 1 English.

Card 4/5

Pre- SOV/11-59-3-2/17
Late Cambrian Deposits of the Amundsen and Sandau Mountains on
Queen Mary Land in the Eastern Antarctic

ASSOCIATION: Kompleksnaya antarkticheskaya ekspeditsiya AN SSSR
(Comprehensive Antarctic Expedition of the AS USSR);
Institut geologii Arktiki, Leningrad (Institute of
Arctic Geology, Leningrad).

SUBMITTED: June 21, 1958.

Card 5/5

VORONOV, P.S., kand. geol.-miner. nauk

On the zone of buried block structures supposed to be between the South Pole and Olaf Prydz Bay in Eastern Antarctica. Inform. biul. Sov. antark. eksp. no.4:19-22 '59. (MIRA 12:11)

1. Nauchno-issledovatel'skiy institut geologii Arktiki.
(Antarctic regions--Geology, Structural)

VORONOV, P.S., kand. geologo-mineralog. nauk

Geological significance of the discovery of new mountains south of the Prince Charles mountain chain in Eastern Antarctica. Inform. biul. Sov. antark. eksp. no.5:15-17 '59. (MIRA 12:10)

1. Nauchno-issledovatel'skiy institut geologii Arktiki.
(Antarctic regions--Mountains)

YORONOV, P.S., kand. geol.-mineral. nauk

Work of the carry-out station. Inform. biul. Sov. antark. eksp. no.4:
37-42 '59. (MIRA 12:11)

1. Nauchno-issledovatel'skiy institut geologii Arktiki,
(Antarctic regions--Meteorology--Observations)

VORONOV, P.S., kand.geologo-mineralog.nauk

Structural scheme of the Antarctic. Inform.biml.Sov.antark.
eksp. no.1:21-25 '58. (MIRA 12:8)

1. Nauchno-issledovatel'skiy institut geologii Arktiki.
(Antarctic regions--Geology, Structural)

VORONOV, P.S., kand.geol-min.nauk

Current problems in studying the structure of the Antarctic.
Inform. biul. Sov. antarkt. eksp. no.2:17-20 '58.
(MIRA 12:8)

1.Nauchno-issledovatel'skiy institut geologii Arktiki.
(Antarctic regions--Geology, Structural)

VORONOV, P.S.; KLIMOV, L.V.; RAVICH, M.G.

Late Cambrian deposits of Mount Amundsen and Mount Sandow on
Queen Mary Coast in the eastern Antarctic. Izv. AN SSSR. Ser.
geol. 24 no.3:3-18 Mr '59. (MIRA 12:4)

1. Kompleksnaya antarkticheskaya ekspeditsiya AN SSSR, Institut
geologii Arktiki, Leningrad.
(Antarctic regions--Geology, Stratigraphic)

VORONOV, P.S.

New data on the geomorphology of eastern Antarctica. Nauch. dokl.
vys. shkoly; geol.-geog. nauki no.3:51-54 '58. (MIRA 12:1)

1. Leningradskiy gornyy institut.
(Antarctic regions--Geology, Structural.)
(Geophysical research)

VORONOV, P.S.

Tangential stresses and regional shifting deformations of the
earth's crust in the Northern part of central Siberia. Inform.
biul. NIIGA no.17:13-20 '59. (MIRA 13:11)
(Siberia--Earth--Surface)

25(1,5)

PHASE I BOOK EXPLOITATION SOV/1464

Voronov, Parfeniy Yefremovich, and Dmitriy Andreyevich Yasenev

Uralmashzavod--pervenets tyazhelogo mashinostroyeniya (The Ural Heavy Machinery Plant, Oldest in Heavy Machinery Building) Moscow, Mashgiz, 1958. 114 p.
(Series: Iz istorii mashinostroyeniya na Urals, vyp. 6) 5,000 copies printed.

Ed.: A. A. Volskov, Candidate of Historical Sciences; Executive Ed. (Ural-Siberian Division, Mashgiz): M. A. Bezukladnikov, Engineer; Tech. Ed.: N. A. Dugina; Editorial Board of Series: A. I. Aleksandrov, Candidate of Technical Sciences; I. N. Bogachev, Doctor of Technical Sciences, A. I. Volskov, Candidate of Historical Sciences, V. I. Dovgopol, Engineer, A. G. Kozlov, Scientific Worker of the Archive Section, and M. I. Sustavov, Engineer.

PURPOSE: This book is intended for engineering - technical, and scientific personnel and students. It may also be useful to propagandists and agitators.

COVERAGE: The book, number 6 of a series of 10 entitled "From the History of Machine Building in the Urals", describes construction and development of the Ural Heavy Machinery Plant imeni Sergo Ordzhonikidze, one of the leading

Card 1/3

The Ural Heavy Machinery Plant (Cont.)

SOV/1464

Soviet machine builders. Principal stages in the development of machines and equipment built by the plant for metallurgical, mining and other branches of industry are presented. Engineering achievements and advanced experience in casting, pressforging and thermal, welding and mechanized assembly processes are generalized, and the main trends of future engineering progress at the plant are indicated. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Introduction	3
Ch. I. The Birth of a Giant	6
Ch. II. With the "UZIM" (Ural Heavy Machinery Plant) Trademark	15
Excavators	23
Crushing and grinding mills and sintering furnaces	32
Blast furnace equipment	39
Rolling mills	41

Card 2/3

The Ural Heavy Machinery Plant (Cont.)

SOV/1464

Drilling and perforating machines

49

Ch. III. For Advanced Technology

Casting

55

Press-forging

60

Welding

73

Mechanized assembling

80

87

Ch. IV. Under the Banner of Competition

100

AVAILABLE: Library of Congress

GO/mal
5-15-59

Card 3/3

7H/5
7L1
.75

Voronov, Parfeniy Yefremovich

Uralmashzavod, pervenets tyazhelogo
masinostroyeniya [The Ural Machine
Building Plant, leader in heavy machine
building, by/ P. Ye. Voronov [i] D. A.
Yasenev. Moskva, Sverdlovsk, Mashgiz,
1958.

114 p. illus., diagrs., tables.
(Iz Istorii Mashinostroyeniya na Urale,
vyp.6)

VORONOV, Pargeny Yefremovich; YASENEV, Dmitriy Andreyevich; DUDINA, N.A.,
tekhn.red.

[Ural Heavy Machinery Plant, first of the heavy machinery industry]
Uralsmashzavod - pervenets tiazhelogo mashinostroyeniya. Moskva,
Gos. nauchno-tekhn.izd-vo mashinostroyit. lit-ry, 1958, 114 p.
(MIRA 11:5)

(Sverdlovsk--Machine-tool industry)

VIRUNIV, P. E. and BRAUN, M. P.

"High Strength Low Alloy Carburizing Steels," *Stal* 6 (1946) pp 181/188.

B-73331, 1 Apr 54

^K
VORONOV, G. P., and POKROVSKIY, G. I.

"On the Polarization of Light by Reflection at Diffuse Reflecting
Bodies, Zeitschrift fur Physik, 1924, Vol. 30, No. 2, pp 139-150.

WUJONOV, G. P., and POZDNYANIN, G. I.

"On the Selective Reflection of Light at Diffuse Reflecting Bodies,"
Zeitschrift fur Physik, 1924, Vol. 30, No. 6, pp358-370.

VORONKOV, G. P., and POKROVSKIY, G. I.

"The Depolarization of Light in Diffuse Reflection," Zeitschrift
für Physik, 1925, Vol. 33, pp 860-869.

VORONOV, G. P. AND POPOVSKIY, G. I.

"The Light Scattering in Coarsely Dispersed Media, of Higher Concentration," Zeitschrift fur Physik, 1926, Vol. 35, No. 8-9, pp 633-641.

VORONKOV, G. P., and POMROVERNY, G. I.

"The Optical Properties of Dispersed Mercuric Sulfide," Kolloid-Zeitschrift, 1927, Vol. 43, pp 78-81.

"Hydrosols of red HgS were prepd. in several degrees of dispersion by means of colloid mill. These were illuminated by a bundle of parallel rays of light an an exam. was made of the light scattered at right angles to the illuminating ray and of the transmitted light. For coarse particles the scattered and transmitted light are nearly the same, but as the degree of dispersion increases they become continuously more nearly complementary. The transition sets in when the particles are still relatively coarse. It was observable with particles 1μ in radius."

VORONKOV, G. P., and FORKROVSKIY, G. I.

"Optical Examination of Substances of Powder or Fiber Structure,"
Kolloid-Zeitschrift, 1928, Vol. 45, pp 1-7.

VORONKOV, G. P., and POKROVSKIY, G. I.

"Experimental Investigation of the Absorption Ability of Some Materials for Light of Different Wave Lengths as a Function of Particle Size," Kolloid-Zeitschrift, 1930, Vol. 50, pp17-19.

"The ratio of the transmitted light to the incident light was detd. for HgS and ultramarine suspensions at various wave lengths and for particle sizes, detd. by Stokes' law, from 0.75 to 475μ . The exptl. values of the absorption coeff. approach those required by the Rayleigh theory as the particle size decreases. The difficulties of accurate duplication are the irregular sizes of the particles and the magnification of errors by the graphical differentiation used. The color of the suspension changes when the effective radius is less than the wave length of the incident light."

V'YALOV, O.S.; VOROKOV, P.S.

Geological structure of the Banger "oasis" in Queen Mary Land
in the Antarctic. Visnyk AN URSR 27 no.6:39-42 Je '46.
(Antartic regions--Geology) (MIRA 9:9)

VYALOV, O.S.; VORONOV, P.S.

Granite outcrops at the Knox coast in Antarctica. Dokl. AN SSSR
109 no.6:1187-1190 Ag '56. (MIRA 9:11)

1. Deystvitel'nyy chlen Akademii nauk USSR (for Vyalov). 2. Observa-
toriya Mirnyy, Antarkticheskaya ekspeditsiya Akademii nauk SSSR.
(Knox Coast--Granite)

VORONOV, P. Ya.

Let us win the title of a plant of communist labor. Mashinostroitel'
no.5:2-6 My '61. (MIRA 14:5)

1. Sekretar' partkoma Uralmashzavoda.
(Sverdlovsk--Machinery industry)
(Sverdlovsk--Efficiency, Industrial)

VORONOV, R.A.

Voronov, R.A. "Concerning the course and textbook 'Theoretical bases of electrical engineering'", Vestnik vyssh. shkoly, 1949, No. 2, p. 24-27.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

VORONOV, R. A.. PROF

157T24

USSR/Electricity - Systems, Electric Jan 50

"General Equations of a Four-Terminal Network,"
Prof R. A. Voronov, Dr Tech Sci, Docent G. Ye.
Pukhov, Cand Tech Sci, Tomsk Electromech Inst of
RR Transport Engineers, 6 1/2 pp

"Elektrichestvo" No 1

Examines equations of four-terminal network which
are more general than those ordinarily used.
Shows how to solve, by means of proposed equations,
such problems as shunting and short-circuiting ter-
minals of four-terminal networks, switching them

157T245

USSR/Electricity - Systems, Electric Jan 50
(Contd)

off from general circuit, how to replace certain
four-terminal networks by equivalent ones, etc.
Submitted 27 Sep 49.

157T24

VORONOV, R. A., Prof

PA 167118

USSR/Electricity - Circuit Analysis

Aug 50

"Conversions and Substitution Circuits for Linear Electric Circuits," Prof R. A. Voronov, Dr Tech Sci, Tomsk Electromech Inst of RR Engineers

"Elektrichestvo" No 8, pp 3-7

Examines method of obtaining substitute circuit for equivalent basic circuit for any connection and any load. By using conversions of such circuits, it is possible to obtain simple substitute circuit even for complicated circuits.

167118

VORONOV, R. A.

Technology.

Obshchaya teoriia chetyrekhpoliusnikov i mnogopoliusnikov (general theory of quadripoles and multipoles). Moskva. Gosenergoizdat, 1951, 192. p.

9. Monthly List of Russian Accessions, Library of Congress, November 1952 Uncl.

VORONOV, R. A., Prof

USSR/Electricity - Nonlinear Circuits Dec 51
Circle Diagrams

"Circle Diagrams in the Study of Nonlinear
Circuits," Prof R. A. Voronov, Dr Tech Sci,
G. F. Ponomareva, Engr, Tomsk Electromech Inst
of Railway Transport Engineers

"Elektrichestvo" No 12, pp 52-58

Proposes (graphical) method for facilitating the
determ of the phase-shift angles between currents
and voltages of the sep parts of the nonlinear

201T82

USSR/Electricity - Nonlinear Circuits Dec 51
(Contd)

20 circuits under study. Method can be used
only if the currents and voltages are sinus-
oidal. Submitted 3 Mar 51.

201T82

VORONOV, R.A.

Calculation of circuits with non-linear elements by the method of
corrections. *Elektrichestvo*, '52, No.11, 58-62. (JLRA 5:11)
(EQA 56, no.666:2328 '53)

VORONOV, R. A.

USSR/Electricity - Literature
Education

Jun 53

"Discussion on a Textbook of Theoretical Electrical Engineering for Higher Schools," Prof V.B. Romanovskiy, Dr Tech Sci (Leningrad); Prof R.A. Voronov, Dr Tech Sci (Tomsk Electromech Inst of Rvy Transport Engrs), G.Ye. Fukhov, Dr Tech Sci, Engrs B.A. Borkovskiy and V.N. Sosunov (all from Tomsk Polytech Inst im Kirov)
Elektrichestvo, No 6, pp 68-70

Contains (a) editorial statement that this is start of discussion on creation of high-quality text on theoretical elec eng, (b) comment by

268T56

Romanovskiy on book "Theoretical Bases of Electrical Engineering" / "Teoreticheskiye osnovy elektrotehniki" / by P.L. Kalantarov and L.R. Neyman, (c) comment by Voronov et al. on book "Fundamentals of Electrical Engineering" / Osnovy elektrotehniki / by K.A. Krug.

268T56

Electrical Engineering Abstracts
May 1954
Engineering.

1340

Calculations

1830. Calculations of currents and voltages in circuits with inertia-free non-linear elements. R. A. VORONOV. *Elektrichestvo*, 1953, No. 8, 44-8. In Russian.

It had been shown previously [Abstr. 2328 (1953)] how to determine the current distribution in circuits comprising non-linear elements with terminal inertia. This is a matter of approximate determination and subsequent introduction of corrections to obtain practically useful results. This method is now extended to circuits with inertia-free non-linear elements. Under certain simplifying conditions all the harmonic current components may be determined (one of the assumptions being that these harmonics are all independent of one another and of the fundamental). Actually the conditions correspond to inertia of the elements for the higher harmonics, whereas the fundamental is treated as inertia-free. These conditions enable effective values of currents and voltages to be obtained and represented as curves. The method is illustrated by circuits whose non-linear elements have symmetrical characteristics without sharp bends.

D. H. KRALS

8-13-54 ja

VORONOV, R.A., professor, doktor tekhnicheskikh nauk; PUKHOV, G.Ye., dotsent,
doktor tekhnicheskikh nauk; LUR'YE, L.S., kandidat tekhnicheskikh nauk.

Apparent capacity of an electric circuit. Elektrichestvo no.4:81 ap '54.

(Electric circuits) (MIRA 7:5)

VORONOV, R.A., professor.

Information in circuits composed of quadripole machines. Elektrichstvo
no.5:58-62 My '54. (MLRA 7:6)

1. Tomskiy elektromekhanicheskiy institut inzhenerov zheleznodorozhnogo
transporta. (Electric circuits)

VORONOV, R. A.

AID P - 4111

Subject : USSR/Electricity
Card 1/2 Pub. 27 - 22/24
Author : Voronov, R. A., Doc. Tech. Sci., Prof.
Title : Letter to the Editor.
Periodical : Elektrichestvo, 11, 86, N 1955
Abstract : The author explains that in an article by G. G. Belogonov on the methods of calculating linear electric circuits in this journal, No. 1, 1955, there are several references to the author's article in this journal, No. 5, 1954. The difference in results of computations between the author and G. G. Belogonov consist in the fact that the latter, for reasons unknown, took different values of conductances than those accepted by the author in his example quoted by G. G. Belogonov. G. G. Belogonov explains in a note that these values were taken mistakenly by him.

Elektrichestvo, 11, 86, N 1955

AID P - 4111

Card 2/2 Pub. 27 - 22/24

Institution : None

Submitted : No date

VORONOV, R.A., professor.

Calculation of periodic currents and voltages in circuits with a nonsinusoidal electromotive force. Elektrichestvo no.8:11-15 Ag 1956.
(MLRA 9:10)

1. Tomskiy elektromekhanicheskiy institut zheleznodorozhnogo transporta.
(Electric currents) (Potential, Theory of)

KURSEV, S.I., doktor tekhnicheskikh nauk, dotsent; MEYEROVICH, E.A., doktor tekhnicheskikh nauk, professor; YORONOV, H.A., doktor tekhnicheskikh nauk, dotsent; POHOMAREVA, G.F., kandidat tekhnicheskikh nauk, dotsent; IONKIN, P.A., kandidat tekhnicheskikh nauk, dotsent.

Methods for calculating nonlinear circuits. Elektrichestvo no.8:91-92
Ag '56. (MLRA 9:10)

1. Kafedra Veyenne-merskey akademii imeni Krylova (for Kursev). 2. Energeticheskiy institut imeni Krzhizhanevskogo AN SSSR (for Meyerevich).
3. Moskovskiy energeticheskiy institut imeni Molotova (for Ionkin).
(Electric circuits)

VORONOV, R.A., doktor tekhn.nauk; VARFOLOMEYEV, G.N., inzh.

Derivation of a principal magnetization curve using an electronic
oscillograph. Trudy OMLIT 42:101-106 '63.

(MIRA 18:10)

AUTHOR: [Faint text]

[Faint, mostly illegible text body]

SEE CODE: ER
Card 1/1

ENCLOSURE

VORONOV, R.A., prof.

Calculation of periodic currents and voltages in nonsinusoidal
forms of transformation in electromotive forces. Trudy TBIIZHT
23:3-15 '57.

(Electric currents)

(MIRA 13:11)

N/5
613.48
.V9

Optika v geodezicheskom priborostroyenii (Optics in geodetic instrument construction)
Moskva, Geodezizdat, 1957.

132 (2) p. diags., graphs, tables.

"Literatura": p. (134)

Call Nr: AF 1141871

V. Voronov, Rostislav V. Voronov
AUTHOR: Voronov, Rostislav V. *V. Voronov*
TITLE: Optics in the Manufacture of Surveying Instruments
(Optika v geodezicheskom priborostroyenii)
PUB. DATA: Izdatel'stvo geodezicheskoy literatury, Moscow, 1957,
133 pp., 4000 copies
ORIG. AGENCY: Not given
EDITORS: Editor: Yeliseyev, S.V., Candidate of Technical
Sciences; Editor of the Publishing House: Vasil'-
yeva, V.I., Technical Editor: Romanova, V.V.,
Correctors: Grigor'yeva, V.A., and Smirnova, A.I.

Card 1/5

Optics in the Manufacture of Surveying Instruments (Cont.) Call Nr: AF 1141871

PURPOSE: This book can serve as a brief reference manual for designers and technicians engaged in the manufacture of surveying instruments, as well as for surveyors working in machine shops and plants.

COVERAGE: The book contains a brief description of the optical systems used in surveying instruments. The basic problems encountered in designing simple optical systems are discussed and the technological processes of manufacturing optical parts are examined. The book contains Russian contributions. The author expresses thanks to Editor Teliseyev for aiding with the manuscript. There are 8 bibliographic references, all of which are Slavic.

Card 2/5

Call Nr: AF 1141871

Optics in the Manufacture of Surveying Instruments (Cont.)

Table of Contents:

Chapter I. Optical Systems Used in Surveying Instruments

1. Telescopes	5
2. Microscopes for reading devices	10
3. Magnifying glasses and eyepieces	11
4. Illuminating devices	13

Card 3/5

Call Nr: AF 1141871

Optics in the Manufacture of Surveying Instruments (Cont.)

Chapter II. Methods of Design in Optical Systems

5. Basic formulae for ray tracing	16
6. Aberration of optical systems	20
7. Methods of ray tracing	26
8. Basic formulae for contour and correction computations	34
9. Design of microscope objectives	42
10. Methods of design of objectives of telescope systems	52
11. Oculars of telescopes	75
12. Determination of light losses in optical instruments	78
13. Tolerances	79
14. Preparation of complete drawing sets, diagrams and specifications for optical systems	84

Card 4/5

Optics in the Manufacture of Surveying Instruments (Cont.) Call Nr: AF 1141871

Chapter III. Manufacture of Optical Components

15. Set-up for optical production, tool and accessory design. Brief review of equipment	91
16. Basic and accessory materials used in optical production	108
17. Technological processes in manufacture of optical components	111
18. Brief information on the technology of cementing and silver plating	131
Appendix GOCT list	134
AVAILABLE: Library of Congress	

Card 5/5

VORONOV, S.

Against the scattering of funds. Fin. SSSR 20 no.1:69-71 Ja '59.
(MIRA 12:2)

1. Upravlyanyshchiy Chelyabinskoy kontoroy Prombanka.
(Chelyabinsk Province--Economic policy)

YURZHENKO, T.I.; PUCHIN, V.A.; VORONOV, S.A.

Polymerization and copolymerization of some peroxide monomers.
Dokl. AN SSSR 164 no.6:1335-1338 O '65.

1. L'vovskiy politekhnicheskii institut. Submitted April 6, 1965. (MIRA 18:10)

L 36283-66 EWT(m)/EWP(J)/T RM/WW/JWD

ACC NR: AP5027232

(A)

SOURCE CODE: UR/0020/65/164/006/1335/1338

AUTHOR: Yurzhenko, T. I.; Puchin, V. A.; Voronov, S. A.

ORG: L'vov Polytechnical Institute (L'vovskiy politekhnicheskii institut) 44
43
B

TITLE: Polymerization and copolymerization of some peroxide monomers

SOURCE: AN SSSR. Doklady, v. 164, no. 6, 1965, 1335-1338

TOPIC TAGS: polymerisation, copolymerization, monomer, peroxide, resin

ABSTRACT: The polymerization and copolymerization of alkyl peresters (tert-butylperacrylate, tert-amylperacrylate, dimethylethynylmethyl peracrylate, p-nitrocumylperacrylate, and tert-butylpermethacrylate) with nonperoxide vinyl monomers was studied to extend their use for the preparation of graft and modified polymers. The results of polymerizations at different temperatures and with different concentrations of peresters are given in Table 1. The optimal temperatures of polymerization extended from 0-50C; tert-butylpermethacrylate copolymerized with styrene by exponential law, while the polymer formed was less stable than the monomer. The copolymerization of the remaining peresters proceeded as a zero-order reaction. The copolymerization of tert-butylperacrylate with methyl methacrylate proceeded much faster than with styrene and its rate increased with the concentration of the perester. Analogous reactions of cumyl peracrylates $H_2C:chc(O)OOC(CH_3)_2$ R (R=H, Cl, or Br) and cumylpermethacrylates

Card 1/3

UDC: 6780015

L 36283-66

ACC NR: AP5027232

Composition of mixture	temp. in °C	concn. of perester (mole%)	rate of polymerization (%/hr)	degree of polymerization %	intrinsic viscosity	molec. weight
St. V + I	40	1	0.4	28.7	0.712	164 000
		2	0.5	38.8	0.428	81 000
		5	0.55	42.5	0.213	29 400
	60	10	0.55	41.0	0.119	17 100
		1	1.0	41.1	0.819	135 000
		2	1.1	42.2	0.401	76 300
St. II + II	60	5	1.5	43.0	0.231	86 700
		10	1.25	42.6	0.111	18 000
	60	25	1.01	43.7	0.033	9 000
		2	3.1	45.8	0.406	77 000
St. III + III	60	5	4.1	41.1	0.188	25 500
		10	3.8	37.7	0.126	15 200
		1	1.0	40.8	0.531	111 000
St. IV + IV	60	2	1.2	42.0	0.441	77 000
		5	1.0	43.7	0.206	29 800
		10	1.4	41.8	0.125	15 000
St. V + V	60	2	1.90	40.0	0.1806	24 000
		5	3.3	39.2	0.0983	9 300
		10	4.45	39.0	0.0582	5200
St. VI + VI	60	1	0.75	37.1	0.145	10 000
		2	0.8	39.9	0.101	11 000
		5	0.9	43.0	0.055	4 800
MM. + I	40	1	3.0	49.0	0.247	39 000
		2	4.4	49.0	0.150	19 000
		5	5.8	46.5	0.0924	9 000
		10	7.4	59.2	0.050	9 500
Card 2/3		1	6.8	27.3	0.084	792 800
		2	11.7	23.4	1.259	1 074 070
		5	18.7	37.4	0.602	375 700
		10	5.3	26.7	0.287	131 200

L 36283-66

ACC NR: AP5027232

$H_2C=C(CH_3)C(O)OOC(CH_3)_2R$ ($R=H, Cl, Br, \text{ or } NO_2$)^{||} proceeded very slowly and gave low-molecular colored polymers. Apparently, this is due to a heterolytic decomposition. The paper was presented by Academician V. A. Kargin in 6 Apr 65. Orig. art. has: 1 fig. and 2 tables.

Table.1. Characteristics of copolymerization of peresters and their polymers

I - tert-butylperacrylate, II - tert-amylperacrylate, III - dimethylethynyl-methylperacrylate, IV - p-nitrocumylperacrylate, V - tert-butylpermethacrylate, St - styrene, MM - methyl methacrylate

SUB CODE: 11/ SUBM DATE: 06Apr65/ ORIG REF: 010/ OTH REF: 009

Card

3/3 H/S

USSR/Chemical Technology. Chemical Products and Their Application -- Silicates.
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 5253

Author: Voronov, S. G.

Institution: None

Title: The Effect of Anomalous Expansion and of Some Other Properties of
Standard Grade Electric Corundum on the Quality of Abrasive Tools

Original

Publication: Abrazivy, 1955, No 14, 6-15

Abstract: On determination of the expansion of abrasive articles made from
electric corundum (E) a sharp increase in size of the samples at a
temperature of $\sim 550^{\circ}$, or the so-called anomalous expansion (AE) of
the order of 2.2-2.7%, was observed. AE results in the formation
of a network of cracks in the wheels. Investigations revealed that
AE can be reduced to 0.2% by calcining of E grain at $450-600^{\circ}$ and
moistening the mix with up to 0.4-1.3% sodium silicate. Preliminary
calcining of E grain at $450-600^{\circ}$ resulted in an increase of its

Card 1/2

USSR/Chemical Technology. Chemical Products and Their Application -- Silicates.
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 5253

Abstract: weight and an exothermic effect in the temperature range of 520-550°. The magnetic fraction isolated from standard grade E No 80, and showing the highest value of AE (7-10%) contained (in %): SiO₂ 7.84, Fe₂O₃ 19.76, TiO₂ 9.70, CaO 2.40, Al₂O₃ 60.30. By means of a mineralogical study there was ascertained the presence therein of a titanium-containing ferro-alloy. The calcining of E at 550 or 1,000° results in an oxidation of the ferro-alloy, fully eliminates AE and causes no appreciable change in grain-size composition.

Card 2/2

VORONOV, T.F.

Advanced method of tomato growing. Kons. i ov.prom. 18 no.4:26-29
Ap '63. (MIRA 16:3)

(Tomatoes)

ABDULLAYEV, G.S.; VORONOV, T.F.

Experience in obtaining high yields of tomatoes at the Lenin
Collective Farm. Kons.i ov.prom. 16 no.3:29-32 Mr '61.
(MIRA 14:3)

1. Kolkhoz imeni Lenina Narimanovskogo rayona Astrakhanskoy
oblasti (for Abdullayev). 2. Astrakhanskiy sovmarkhoz (for Voronov).
(Astrakhan Province—Tomatoes)

VORONOV, T. F.

Conference of the workers employed in the area supplying the
Kharabali canning factory with raw products. Kons. i ov.prom.
15 no.7:44-45 J1 '60. (MIRA 13:6)
(Kharabalinskaya District--Canning industry)

VORONOV, T.F.

Transportation of ripe tomatoes with water in tank trucks.
Kons.1 ov.prom. 15 no.4:38 Ap '60. (MIRA 13:6)

1. Astrakhanskiy sovmarkhoz.
(Astrakhan Province--Tomatoes--Transportation)

COUNTRY : USSR
 CATEGORY : Cultivated Plants. Potatoes. Vegetables.
 Cucurbits.
 ABS. JOUR : *Ref. Jour-Biology*, 1, 1959, No. 166
 AUTHOR : Voronov, I.P.
 INST. :
 TITLE : Cultivation of High Harvests of Vegetable Crops

ORIG. PUB.: *Krasnodar. i osvobodivshis' prov-ost'*, 1958, No. 1, .
 14-18

ABSTRACT : A leading experiment by collective farm members of the Astukhskan region as to the cultivation of tomatoes, eggplants, carrots, onions, cucumbers and similar vegetable cultures is presented. The following varieties were used: *Tomatoes - Ilyak, Volinsky, Br-odil and Shantirov* varieties; *Kaba and Krasnodarskiy* onion varieties, *Shantirov and Vantovaya* carrot varieties; *Solunskiy* sweet pepper. The pre-soaking selection of seeds, treatment of seeds at reduced tempera-

REF: 1/7